Electronic supplementary material

New, inexpensive and simple 3D printable device for nephelometric and fluorimetric determinations based on smartphone sensing

Ezequiel Vidal[1+]*, Anabela S. Lorenzetti[1+], Miguel Ángel Aguirre[2], Antonio Canals[2], Claudia E. Domini[1]*

[1] INQUISUR, Departamento de Química, Universidad Nacional del Sur (UNS)-CONICET, Av. Alem 1253, 8000 Bahía Blanca, Argentina
[2] Departamento de Química Analítica, Nutrición y Bromatología e Instituto Universitario de Materiales, Universidad de Alicante, Apdo. 99, 03080 Alicante, España

* Corresponding author.
Av. Alem 1253, 8000 Bahía Blanca, ARGENTINA
+54 291 4595101, int 3558
E-mail address: ezquielvidal.estudio@gmail.com,claudia.domini@uns.edu.ar
[+]These authors contributed equally

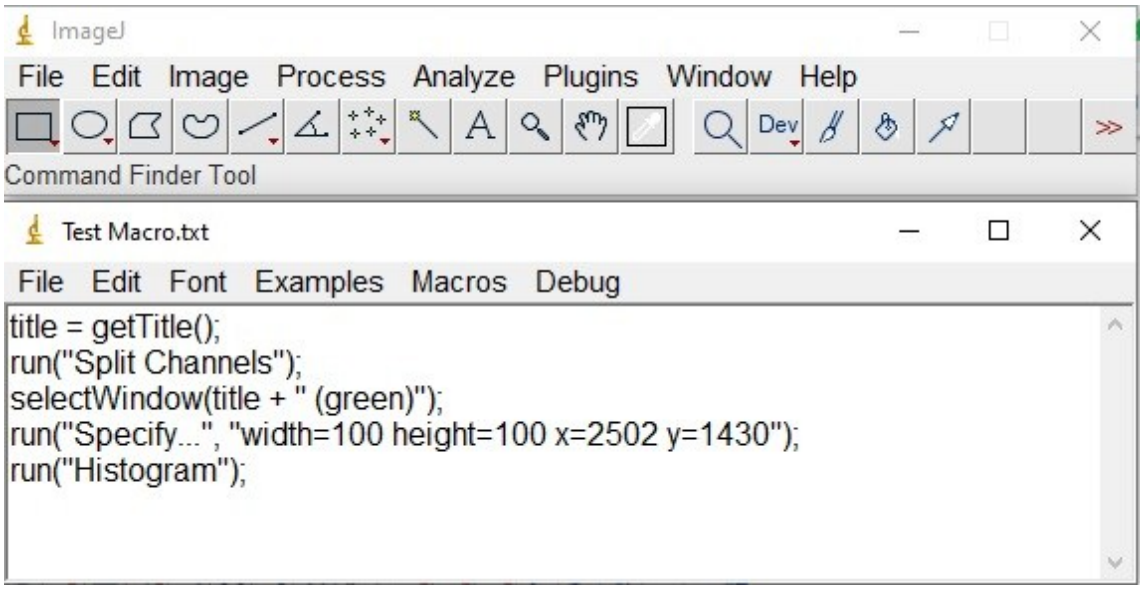

Figure S1. Capture showing Macro Edit window with the entire text of the created function.

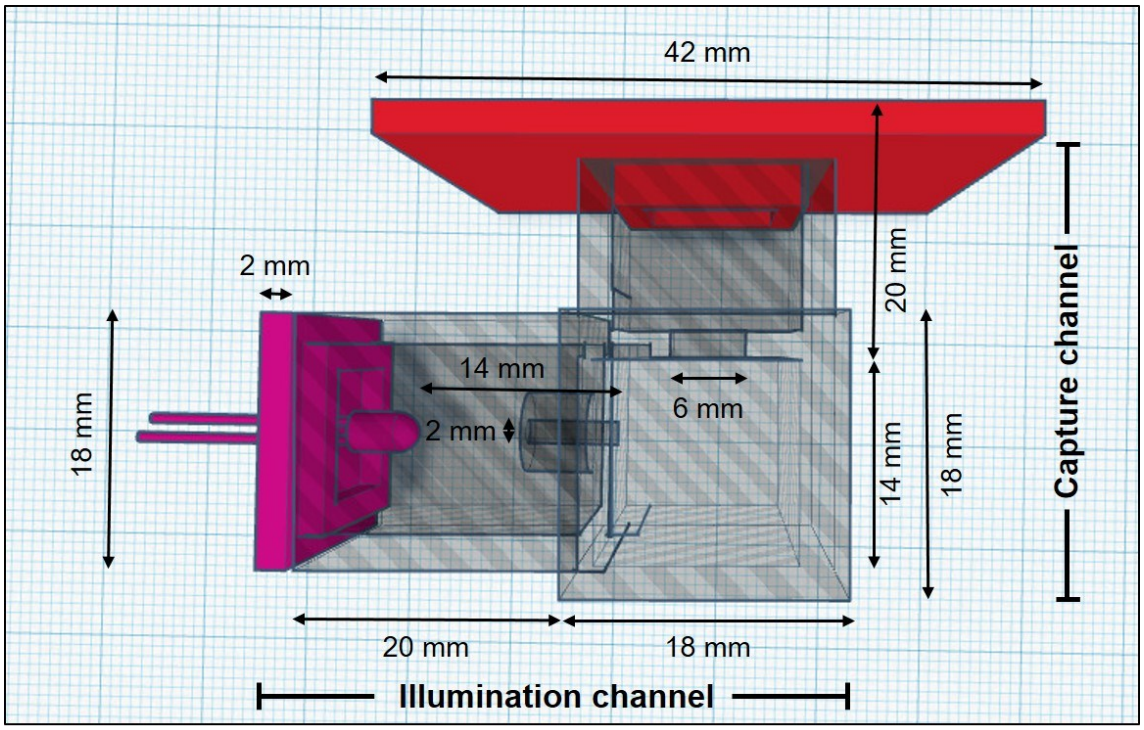

Figure S2: Real dimensions of the device after the optimization study. The colors of the images are illustrative.

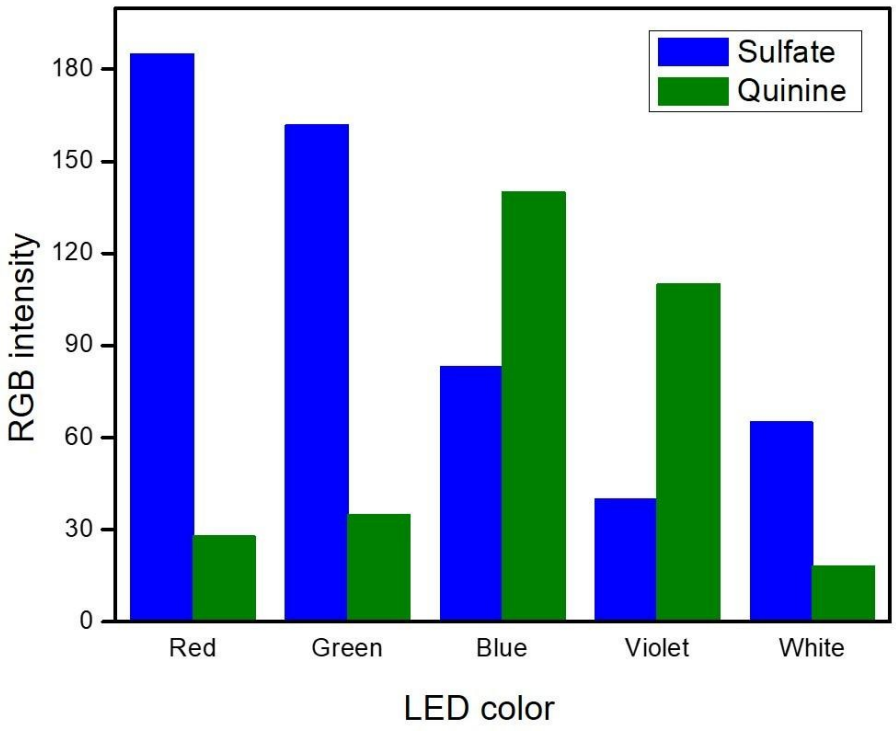

Figure S3: LED color selection. The blue bars correspond to the intensity of the blue channel for sulfate determination, and the green ones to the intensity of the green channel for quinine determination.

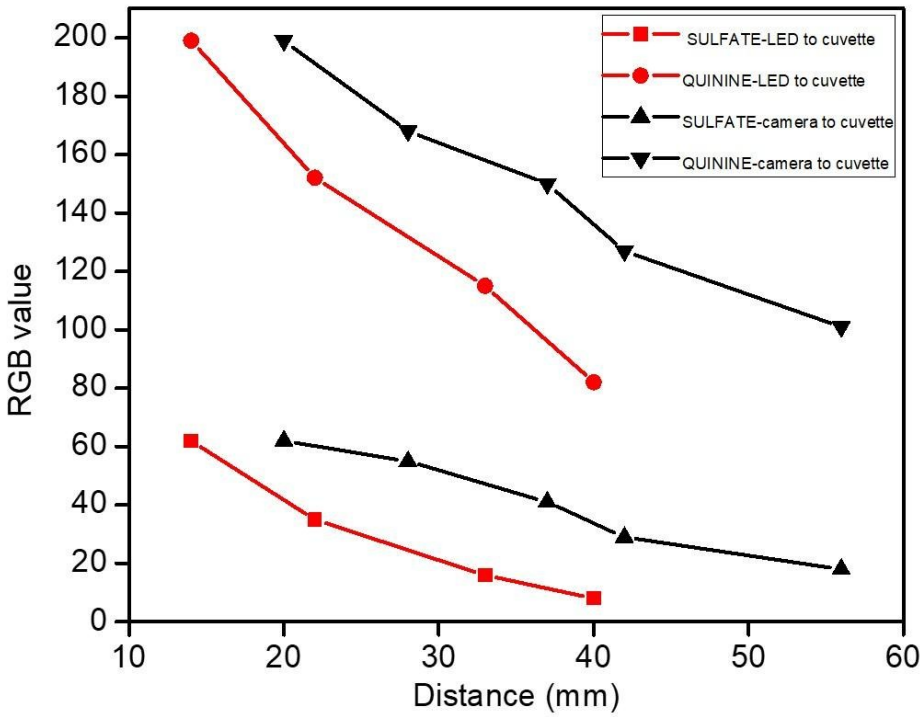

Figure S4: Dispositive distance optimization. The black line represents the effect of the distance between the camera and the cuvette and the red line shows the effect of the distance between the cuvette and the LED light on the signal intensity for both analytes. Conditions for the capture: ISO 400, shutter speed 1/3, opening value f /1.53 and focal length of 4.3 mm employing solutions of 50 mgL-1 of sulfate and 3 mgL-1 of quinine.